

What is claimed is:

1. A method for projecting content from a computing device to alternate display device(s), comprising:
  - displaying via a user interface mechanism at least one indication corresponding to available alternate display devices;
  - selecting via the user interface mechanism at least one alternate display device from the alternate display devices indicated as available by said at least one indication; and
  - transmitting the content to the selected at least one alternate display device.
2. A method according to claim 1, further comprising:
  - discovering said available alternate display devices capable of receiving the content according to a discovery protocol.
3. A method according to claim 1, wherein said transmitting includes establishing a remote session, via a remoting protocol, between the computing device and the selected at least one alternate display device.
4. A method according to claim 3, wherein the remoting protocol is the remote desktop protocol and the remote session is a terminal services (TS) session.
5. A method according to claim 1, further comprising:
  - designating at least one portion of the content to be hidden when rendered on the selected at least one alternate display device.
6. A method according to claim 1, wherein said transmitting includes transmitting additional content to be rendered on the selected at least one alternate display device when rendering the content.
7. A method according to claim 6, wherein said additional content is input to the computing device to be displayed as an illuminated point over the content being rendered.
8. A method according to claim 7, wherein said additional content is mouse input of the computing device to be displayed as any of (A) a colored dot, (B) a laser pointer and (C) a pointer with a trail on the display of said at least one alternate display device.

9. A method according to claim 1, wherein said transmitting includes:  
transmitting a request to transmit content to an alternate display device of the selected at least one alternate display device; and  
waiting for a response from the alternate display device authorizing the transmission of content according to said transmitting.
10. A method according to claim 1, wherein the content is substantially simultaneously displayed on the selected at least one alternate display device in response to said transmitting.
11. A method according to claim 2, wherein the discovery protocol is the universal plug and play (UPnP) protocol.
12. A method according to claim 1, further comprising specifying via the user interface the content to be transmitted according to said transmitting to the selected at least one alternate display device.
13. A method according to claim 3, further including, for each remote session between the computing device and the selected at least one alternate display device, displaying via the user interface an indication of the signal strength associated with the remote session.
14. A method according to claim 13, wherein a predetermined number of levels of signal quality can be shown for each remote session based on at least one of obstructions, distance and data rate to be maintained.
15. A method according to claim 13, further including storing a file associated with the signal strength of the remote session.
16. A computer readable medium comprising computer executable modules having computer executable instructions for carrying out the method of claim 1.
17. A computing device comprising means for performing the method of claim 1.
18. A modulated data signal carrying computer executable instructions for performing the method of claim 1.

19. At least one computer readable medium comprising computer executable instructions for implementing a method of interfacing with a user of a computing device having content capable of being projected to other computing devices according to at least one projection protocol, the method comprising:

displaying a user interface on the computing device;

discovering whether at least one alternate display device is capable of receiving the content according to the at least one projection protocol; and

if, according to said discovering, at least one alternate display device is capable of receiving the content, displaying at least one indication of the at least one alternate display device via the user interface.

20. At least one computer readable medium according to claim 19, the method further including: selecting the content via the user interface.

21. At least one computer readable medium according to claim 19, wherein said discovering includes discovering whether the at least one alternate display device is capable of receiving the content according to the at least one projection protocol.

22. At least one computer readable medium according to claim 19, wherein said discovering includes discovering at least one Internet Protocol (IP) address corresponding to the at least one alternate display device.

23. At least one computer readable medium according to claim 19, wherein said discovering includes detecting at least one alternate display device advertising its presence according to Universal Plug and Play (UPnP) protocol(s).

24. At least one computer readable medium according to claim 19, the method further including: selecting via the user interface an indication of said at least one indication; and controlling a characteristic of the alternate display device associated with the selected indication.

25. At least one computer readable medium according to claim 24, wherein said controlling includes controlling according to Remote Desktop Protocol (RDP).

26. At least one computer readable medium according to claim 19, the method further including:  
selecting via the user interface an indication of said at least one indication; and  
creating a remoting connection to the alternate display device associated with the selected indication.
27. At least one computer readable medium according to claim 26, the method further including:  
transmitting the content to the alternate display device associated with the selected indication via the remoting connection.
28. At least one computer readable medium according to claim 26, wherein said creating includes at least one of (A) creating a Terminal Services session with the alternate display device and (B) creating a remoting connection with universal plug and play (UPnP) technology.
29. At least one computer readable medium according to claim 19, the method further including:  
selecting via the user interface an indication of said at least one indication; and  
deconstructing a remoting connection to the alternate display device associated with the selected indication.
30. At least one computer readable medium comprising computer executable instructions for implementing a method of interfacing with a user of a computing device having a plurality of displays capable of displaying separate content, effectively disaggregating the display of the computing device, the method comprising:  
displaying a user interface on a first display of the plurality of displays of the computing device;  
discovering whether at least one alternate display device is capable of receiving content associated with at least one portion of one of the plurality of displays of the computing device according to at least one extension protocol; and  
if, according to said discovering, at least one alternate display device is capable of receiving the content, displaying at least one indication of the at least one alternate display device via the user interface.
31. At least one computer readable medium according to claim 30, the method further including:  
selecting the at least one portion of one of the plurality of displays via the user interface;  
selecting via the user interface an indication of said at least one indication;

creating a remoting connection to the alternate display device associated with the selected indication; and

transmitting the at least one portion of the display to the alternate display device associated with the selected indication via the remoting connection.

32. At least one computer readable medium according to claim 31, wherein said creating includes creating a Terminal Services session with the alternate display device.

33. At least one computer readable medium according to claim 31, wherein said transmitting includes transmitting input received by the at least one portion of the display as a special indication on the alternate display device.

34. At least one computer readable medium according to claim 33, wherein said transmitting includes transmitting pointer input received by the at least one portion of one of the plurality of displays as a colored mark on the alternate display device.

35. At least one computer readable medium according to claim 30, wherein said discovering includes discovering whether at least one alternate display device is capable of receiving said at least one portion of the display of the computing device according to the at least one extension protocol.

36. At least one computer readable medium according to claim 30, wherein said discovering includes discovering at least one Internet Protocol (IP) address corresponding to the at least one alternate display device.

37. At least one computer readable medium according to claim 30, wherein said discovering includes detecting at least one alternate display device advertising its presence according to Universal Plug and Play (UPnP) protocol(s).

38. At least one computer readable medium according to claim 30, the method further including:  
selecting via the user interface an indication of said at least one indication; and  
controlling a characteristic of the alternate display device associated with the selected indication.

39. At least one computer readable medium according to claim 38, wherein said controlling includes controlling according to the Remote Desktop Protocol (RDP).

40. At least one computer readable medium according to claim 30, the method further including:  
selecting via the user interface an indication of said at least one indication; and  
deconstructing a remoting connection to the alternate display device associated with the selected indication.

41. At least one computer readable medium comprising computer executable instructions for carrying out a method for transmitting content from a first computing device to at least one second computing device for manipulation or rendering, the method comprising:

discovering at least one second device available to receive content from the first computing device comprising the at least one computer readable medium, the at least one second device including at least one of (A) at least one available wireless projector and (B) at least one available other computer;

displaying via a user interface a list reflecting the at least one second device discovered as available according to said discovering;

selecting a device from the list;

establishing a remote computing session with the device; and

transmitting content to the device according to a protocol associated with the remote computing session.

42. At least one computer readable medium according to claim 41, the method further including configuring via the user interface a setting, wherein said setting governs at least one characteristic of the remote computing session established according to said establishing.

43. A method for projecting content from a first computing device to at least one other computing device, including:

setting the first computing device into a Presentation mode;

instantiating on said first computing device software functionality associated with content projection;

discovering according to a discovery mode whether at least one other computing device is available to receive and display projected content;

if at least one other computing device is discovered, displaying a user interface reflecting the available at least one other computing device;

via the user interface, one of (A) selecting content to project, (B) selecting a target device for projection and (C) configuring a projection characteristic.

44. A method according to claim 43, wherein said instantiating includes instantiating said software functionality associated with content projection one of (A) at startup of the first computing device and (B) as part of said setting the first computing device into Presentation mode.

45. A method according to claim 43, wherein said setting includes setting the first computing device into Presentation mode via any of (A) a menu location under a start menu, (B) a top level user interface mechanism of said user interface, (C) display bar part (D) a shortcut and (E) a sidebar.

46. A method according to claim 43, wherein said configuring includes at least one of (A) setting a password for the projection, (B) selecting a cloning mode or an extended mode, (C) selecting the screen resolution and (D) selecting video or audio and video.

47. A method according to claim 46, wherein at least one of (A) said selecting a cloning mode or an extended mode defaults to cloning mode and (B) said selecting the screen resolution defaults to current settings and (C) said selecting video or audio and video defaults to audio and video.

48. A method according to claim 43, wherein said setting the first computing device into Presentation mode includes performing an operating system task.

49. A method according to claim 48, wherein said performing an operating system task includes at least one of (A) turning off notifications, (B) turning off screen blanking, (C) preventing audio from sources other than from the content to be projected, (D) changing an aspect of power distribution/conervation, (E) changing a desktop background and (F) changing a screen resolution.

50. A method according to claim 43, wherein said discovering according to a discovery mode includes discovering for a predetermined amount of time after the Presentation mode is set.

51. A method according to claim 43, wherein said discovering according to a discovery mode occurs in the background process of said first computing device without any user intervention.

52. A method according to claim 43, wherein said displaying includes displaying via the user interface at least one of (A) a status of projection, (B) an indication of an ability to disconnect from at least one other computing device, (C) an indication that additional other devices are available, (D)

an indication that at least one other computing device discovered according to said discovering is currently unable to receive content and (E) an indication of most recently used (MRU) other devices that may be selected to bypass said discovering for the recently used other devices.

53. A method according to claim 43, further comprising:

assigning a name and a password to the content, whereby content can only be sent to a selected target device if the name and password are received from the selected target device for projection.

54. A method according to claim 43, further including in response to said selecting content to project and said selecting a target device for projection, creating a remote session between said first computing device and said target device and projecting said content to said target device via said remote session.

55. A computer readable medium comprising computer executable modules having computer executable instructions for carrying out the method of claim 43.

56. A computing device comprising means for performing the method of claim 43.

57. A modulated data signal carrying computer executable instructions for performing the method of claim 43.

58. A server computing device for projecting content from the server computing device to client display device(s), comprising:

a discovery component that operates according to a discovery protocol to discover and control available client display devices capable of receiving the content;

a remote session component that operates according to at least one remoting protocol to establish remote sessions between the server computing device and available client display devices, to package content for projection and to transmit packaged content to selected client display devices;

a user interface component for at least one of (A) displaying at least one indication corresponding to the available client display devices discovered by and capable of being controlled by said discovery component and (B) receiving a selection of an indication of target client display device and a selection of content, whereby said remote session component creates a remote session



for said target client display device and said server computing device and said content is projected to said target client display device.

59. A server computing device according to claim 58, wherein said discovery component discovers client display devices that are advertising their availability according to the discovery protocol.

60. A server computing device according to claim 58, wherein said at least one remoting protocol includes the remote desktop protocol and said remote sessions are terminal services (TS) sessions.

61. A server computing device according to claim 58, wherein before transmitting content to a selected client display device, said remote session component transmits an authorization request to the selected client display device and waits for a response from the selected client display device authorizing the transmission of content.

62. A server computing device according to claim 58, wherein the discovery protocol is the universal plug and play (UPnP) protocol.

63. A method for connecting a computing device to an alternate display device in order to project content from the computing device to the alternate display device, comprising:

discovering according to a discovery protocol at least one alternate display device capable of receiving and rendering projected content;

selecting content to be projected and an alternate display device from said at least one alternate display device, whereby the selected content is to be projected to the selected alternate display device; and

establishing a connection between the computing device and the selected alternate display device.

64. A method according to claim 63, wherein said establishing a connection includes:  
generating a ticket by a remote connector component of the computing device;  
transmitting the ticket to the selected alternate display device; and  
receiving a response to said transmitting by the remote connector component.

65. A method according to claim 64, wherein the ticket includes at least one of (A) information about how to connect to the computing device and (B) information about a mode in which to connect.
66. A method according to claim 65, wherein said mode includes at least one of a projection mode, an extended desktop mode and a mode for a specific application.
67. A method according to claim 63, further comprising:  
transmitting said selected content to said selected alternate display device via said connection.
68. A method according to claim 63, wherein said discovering includes detecting at least one advertisement of a capability to receive projected content from an alternate display device.
69. A method according to claim 63, wherein said discovering includes issuing a search request for a particular type of device via the discovery protocol whereby all devices of the particular device that receive the search request respond by sending a message to said computing device.
70. A method according to claim 63, further including, after discovering an alternate display device of the at least one alternate display device, downloading to said computing device a service document of the alternate display device.
71. A computer readable medium comprising computer executable modules having computer executable instructions for carrying out the method of claim 63.
72. A computing device comprising means for performing the method of claim 63.
73. A modulated data signal carrying computer executable instructions for performing the method of claim 63.
74. A method for controlling an alternate display device, comprising:  
establishing a connection between a computing device and an alternate display device for the purpose of projecting content from the computing device to the alternate display device;  
receiving from the alternate display device a session token that identifies the projection session between the alternate display device and the computing device and authorizes said

computing device to control the projection session of the alternate display device; and  
controlling the alternate display device according to the authorization of the session token.

75. A method according to claim 74, wherein said controlling includes at least one of (A) disconnecting said connection, (B) changing the display settings for the projection session, (C) retrieving the display settings for the projection session, (D) transferring authorization to control the alternate display device to a third party device and (E) blacking out the projection session on the alternate display device.

76. A method for receiving projected content by a computing device from a content sending device, comprising:

specifying via a user interface mechanism of the computing device that the computing device is available to receive projected content; and

broadcasting the availability of the computing device via a discovery protocol, so that a content sending device that is looking for available alternate display devices receives an indication that the machine is available.

77. A method according to claim 76, further comprising:

in response to said broadcasting, receiving a request to project content from the content sending device;

specifying via the user interface whether the request is accepted;

transmitting to the content sending device whether the request is accepted; and

if the request is accepted, receiving content from the content sending device.

78. A method according to claim 77, further comprising:

displaying the content on a display of the computing device.

79. A method according to claim 78, wherein said displaying includes displaying alternate content in addition to the content on the display.

80. A method for enabling an alternate display device to receive content from a computing device, comprising:

receiving a request to deliver the content from the computing device via a network;

in response to said receiving, accepting the request via a user interface and establishing a

remote computing session with the computing device; and  
receiving the content from the computing device over the network.

81. A method according to claim 80, further comprising:  
rendering the content received from the computing device.
82. A method according to claim 81, wherein said rendering includes rendering the content according to an accessibility infrastructure located on the alternate display device.
83. A method according to claim 81, wherein said rendering includes rendering the content according to a multi lingual user interface such that the content is displayed according to the another language.
84. A method for enabling an alternate display device to receive content from a computing device, comprising:  
requesting via a user interface to receive projected content from the computing device;  
sending a request to receive projected content from the computing device;  
receiving a response from the computing device including information to establish a remote computing session with the computing device;  
establishing a remote computing session with the computing device based on said information; and  
wirelessly receiving the content from the computing device.
85. A method for projecting content from a plurality of computing devices to an alternate display device, comprising:  
discovering according to a discovery protocol an alternate display device capable of receiving and rendering projected content;  
establishing a remote session, via a remoting protocol, between a first computing device of the plurality of computing devices and the alternate display device;  
transmitting first content from the first computing device to the alternate display device via the remote session;  
rendering the first content via a first display of the first computing device;  
transmitting second content from a second computing device to the alternate display device

via the remote session; and

rendering the second content via a second display of the second computing device.

86. A method according to claim 85, wherein the remoting protocol is the remote desktop protocol and the remote session is a terminal services (TS) session.

87. A method according to claim 85, wherein the rendering of the first content is substantially simultaneous with said transmitting of the first content.

88. A method according to claim 85, further including wherein the discovery protocol is the universal plug and play (UPnP) protocol.